

REMARKS/ARGUMENTS

Claims 1-10 are pending. Claim 10 is added and finds support in original claim 1 and throughout the entire specification. Claims 1-8 are currently amended for grammatical reasons. Claim 2 is amended to remove the phrase “consist of” which has been objected to; therefore obviating the objection. Claims 5 and 6 are amended to improve readability and clarity; therefore obviating the 35 U.S.C. §112 rejection for indefiniteness. No new matter has been entered.

The present invention relates to the removal of N₂O from a gas mixture; for example, by catalytic decomposition of N₂O found in the gaseous by-product of nitric acid production. The manufacture of nitric acid produces by-products such as nitrogen monoxide, nitrogen dioxide and nitrous oxide (i.e. N₂O). Of the three nitrogen oxides, N₂O is the only one that is not capable of being removed by water absorption. Accordingly, Applicants’ process removes the N₂O by-product by catalytic decomposition while still maintaining control of the gas permeability of the catalyst (i.e. wire-woven and/or drawn-loop knit).

In the 35 U.S.C. §102(b) rejection in light of *Brandin*, the Office asserts that *Brandin* discloses a method for producing zeolite catalytic nets that are able to “convert” N₂O with a selectivity of about 0.05. However this is not correct. *Brandin* teaches that “by the operation of the catalytic nets in the reactor the amine rate of oxidation is substantially increased. At the same time, a quite unexpected improvement of the selectivity to yield nitrogen gas is achieved due to decreased formation of laughing gas” (i.e. N₂O) (pg 7, lines 7-14). Therefore, *Brandin* teaches the inhibition of N₂O production, not the removal/decomposition of N₂O as claimed by Applicants. Furthermore, the Office has mis-interpreted Figure 5 in *Brandin*. In connection with *Brandin*’s method, Figure 5 portrays selectivities of the generation of the noted gases, not the decomposition. Therefore, a reading of the graph shows a 0.95 selectivity for the production of N₂ and only a 0.05 selectivity for the

production of N₂O which correlates with the goal of the method described above.

Accordingly, *Brandin* fails to teach or suggest the process for removing N₂O as claimed by Applicants.

Concerning the 35 U.S.C. §103(a) rejections in view of *Brandin* and *Gorywoda*, and *Brandin* and *Schumacher*, Applicants submit that these rejections fall in view of the above discussion of *Brandin*. Even if *Gorywoda* is accepted to teach the use of Fe-Cr-Al alloys as a good material for a catalytic net for converting N₂O, *Brandin* fails to teach or suggest a process for removing N₂O using catalytic nets; therefore, the combination of the two does not teach or suggest the process for removing N₂O as claimed by Applicants. The same holds true for the combination of *Brandin* and *Schumacher* as well. *Schumacher* may teach a process for manufacturing nitric oxides using an N₂O destroying catalyst, but *Brandin* fails to teach an N₂O destroying catalyst. Accordingly, one cannot substitute the N₂O destroying catalyst of *Brandin* for that of *Schumacher* as the Office asserts. Therefore, the combination of *Brandin* and *Schumacher* does not teach or suggest the process of removing N₂O as claimed by Applicants.

For the reasons discussed above, Applicants submit that all now-pending claims are in condition for allowance. Applicants respectfully request the withdrawal of the rejections and passage of this case to issue.

Respectfully submitted,

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